

Appendix F

Synthesis Group

Report to the Legislature—

A Comprehensive Analysis of the Integrated Waste Management Act Diversion Rate Measurement System

August 2, 2001

Appendix F

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Draft Synthesis Group Recommendations

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The following tables contain specific descriptions of recommendations. Please note that not all Working Groups had proposed recommendations in all of the above major categories.

1. Emphasize Diversion Programs, Not Diversion Rates

Ref #	Solution Considered	Working Group Recommendation	Issue Addressed	Criteria Met/Considerations	Synth. Group Recommend ? Yes/No	Additional Staff Comments
DRS-SH-3.5/SH – 4.7	The Disposal Reporting System works reasonably well for the majority of jurisdictions. For those it does not work well for, the Board should recognize there is the potential for significant errors in the disposal reporting system. Focus more emphasis on diversion programs than tonnage/diversion rates.	Long Term, High Priority	Facilities may limit waste disposal from some jurisdictions or charge different fees resulting in inaccurate origin information. Lack of scales and inconsistent standard conversion weight factors for SH vehicles may cause inaccuracies in waste allocation.	Cost-effective Enforceable Ease of Use		Board and jurisdictions would focus less time and expense on tracking each disposal ton and focus more on diversion program implementation. The Board currently has the ability to consider good faith efforts when jurisdictions are unable to achieve the goal.
AM 1.0	1A. Allow continuing use of the existing Adjustment Method (AM) because it estimates waste generation for majority of jurisdictions. Recognize there are various sources/types of errors which make the diversion rate estimate (which uses the AM) an indicator, not an absolute measured diversion rate value.	Short Term, High Priority	Do combined default population and economic change factors, and formula weights, accurately estimate waste generation?	Cost effective Adequate for most jurisdictions Consistent year to year methodology Data is accessible Does not correct for other types of errors in the goal measurement system Easy to use		No additional cost anticipated. No change in AM accuracy. Re-affirms that AM produces an estimate, not an absolute measurement, may prompt added emphasis on diversion program implementation information.
AM 2.0	1A. Develop tiered approach to evaluating diversion rate accuracy	Short Term, High Priority	What jurisdiction characteristics	Low cost Addresses limits of data in		Minimal to moderate Board cost to implement.

<p>in Biennial Review: <u>Level 1</u> Diversion rate estimate is acceptable due to lack of special circumstances. <u>Level 2</u> Diversion rate estimate accuracy is somewhat less due to special circumstances. Focus more on programs. <u>Level 3</u> Diversion rate estimate accuracy is questionable due to special circumstances. Focus more on programs.</p> <p>Add standard “red flag” table of circumstances (that may decrease accuracy of diversion rate estimate) to jurisdiction AR & Biennial Review Agenda Item. <u>Adjustment Method “red flags”:</u> Base-year age Jurisdiction size Jurisdiction growth rate Unbalanced jurisdiction growth Extreme high/low base-year residential generation % Jobs to population ratio Significant change in nature of solid waste production Diversion rate decline despite same or greater diversion program implementation Annexations Rainfall Large visitor influx Large construction projects Drastic change in AM factor <u>DRS “red flags”:</u> Jurisdiction size Waste origin survey frequency Waste flow variability—seasonal and other No scales at landfills Complex jurisdiction boundaries City and county share same name Major one-time events Cooperation between Transfer Stations and Landfills</p>		<p>affect diversion rate accuracy?</p>	<p>AM Not a quantitative measure of error Provides Board similar information for each jurisdiction Identifies jurisdictions which might have special circumstances that decrease accuracy of AM formula Diversion rate is rough indicator</p>	<p>Moderate jurisdiction cost.</p> <p>Provides jurisdictions and Board more comprehensive data for informed judgments.</p> <p>May prompt more jurisdictions to initiate new base-year studies.</p> <p>May prompt added emphasis on diversion program implementation information.</p> <p>May need Board discussion on Implementing tiered approach and “red flag” table of circumstances.</p> <p>No data identified that shows annexations add error to Adjustment Method estimate.</p> <p>No useful data identified to adjust for jurisdiction rainfall.</p>
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ALT 2-b	<p>As an alternative way for jurisdictions to demonstrate compliance, the State would produce a menu of potential programs and how they would be evaluated. This system would not replace the current measurement system. Each jurisdiction would choose specific programs from the menu based on their demographics and other local issues. This programmatic document would be certified by the state as adequate, with audit and monitoring by state staff. Criteria would include program guidelines, monitoring for effectiveness, and proof of implementation, to be reported each year.</p>	<p>High Priority</p>	<p>Many jurisdictions currently spend significant resources on documentation of existing diversion rather than program implementation. By shifting the emphasis to development of programs and implementation, significant resources each year can be shifted, resulting in higher overall diversion. Also, allows jurisdictions with very difficult measurement problems to move forward toward meeting AB 939 goals despite measurement problems.</p>	<p>Essential to develop method of determining program effectiveness/monitoring progress, such as establishing program criteria and/or using waste sorts to check on recyclables in waste stream. Shifts resources from documentation to implementation and monitoring of programs. The Board would still need to monitor and enforce program implementation requirements. Reduces local resources focused on achieving "numerical compliance", and shifts more resources to implementing effective programs. May require regulatory or legislative changes.</p>	<p>Determining program effectiveness and monitoring progress may mean diversion needs to be counted.</p> <p>Evaluating private diversion programs may be difficult and/or controversial for local governments and the Board.</p> <p>Some Board resources would be required to develop methods and/or regulations.</p>
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2. Small or Rural Jurisdictions Have a Disproportionate Share of Errors

Ref #	Solution Considered	Working Group Recommendation	Issue Addressed	Criteria Met/Considerations	Synth. Group Recommend ? Yes/No	Additional Staff Comments
ALT 2-a	In addition to existing statutory provisions for rural reductions, allow rural jurisdictions to demonstrate AB 939 compliance based on local program implementation and effectiveness instead of data and calculations that may contain errors that are difficult to resolve or require a new base year study.	High Priority	Inherent difficulties are associated with obtaining accurate waste disposal and diversion rate data for rural counties. Small and rural counties have limited resources to correct inaccuracies through new base year studies and documenting diversion.	<ol style="list-style-type: none"> 1. Meets the intent of AB 939 by focusing on effective program implementation and requiring "good faith performance efforts". 2. Waste loadings from rural jurisdictions represent < 5% of State's total waste volume. 3. Board and Board staff could focus on more significant waste streams 4. Small or rural counties would still need to implement DRS, but the data would be used as an indicator. 5. May require legislative action. 6. Need to reconsider the definition of rural to address rural cities in non-rural counties. 		<p>Need to determine how jurisdictions would demonstrate program effectiveness which could mean counting diversion.</p> <p>Larger jurisdictions may see this solution as unfair.</p> <p>This solution may already be addressed in "good faith efforts" process. "Good faith efforts" are determined at the end of the Board's Biennial Review process.</p> <p>Some Board resources would be required to develop methods and/or regulations.</p> <p>Disposal Reporting System and Adjustment Method System data supports the fact that small jurisdictions have greater errors.</p>

3. Promote Regional Solutions

Ref #	Solution Considered	Working Group Recommendation	Issue Addressed	Criteria Met/Considerations	Synth. Group Recommend? Yes/No	Additional Staff Comments
DRS-SH-1.6	Provide incentives for jurisdictions to form Regional Agencies (RA), such as allow a lower diversion rate or no penalties for individual RA members who fully implement their approved SRRE.	Long Term, Medium/High Priority	Hauler/Self-Haul Issues: Haulers/drivers do not know or have incentive to obtain accurate waste origin; no DRS enforcement for haulers; lack of training and education at facilities; gatekeeper is key/ jurisdictions have no control over private facilities. California's waste stream is complex and it is very difficult and costly to accurately measure diversion at the jurisdiction level.	Increase Accuracy Cost-Effective Enforceable 1.Meets the intent of AB 939 by focusing on regional management and measurement of waste reduction and recycling programs and allows for the measurement to be taken by region. 2.Encourages regional approaches and results in savings in time and cost for program implementation, measurement, and reporting. 3.The many existing regional authorities demonstrate the feasibility and practicality of the regional approach. 4.A regional measurement and reporting system would improve accuracy by unifying the reporting procedure under one authority for all jurisdictions in the regional. 5.Cost effective 6.Enforceable		Requires statutory and/or regulatory change. Additional incentives could include reducing potential maximum fines (currently are \$10,000/day per jurisdiction); grants or loans specifically for programs in regional agencies; preference to regional agencies for existing Board grants and loans. Because of the configuration of their waste sheds, some counties may wish to participate in more than one regional agency; but this makes them liable for multiple fines, and this disincentive should be addressed.
ALT 1-a-4	Increase incentives for forming regional agencies and remove disincentives.					

DRS-AL-2.7	Require disposal origin reported by county not jurisdiction	Long Term, High Priority	<ol style="list-style-type: none"> 1. Mixed loads may not be allocated correctly. Computer programs may not have the capacity to collect information on more than one city or more than a few cities for one truckload. 2. Cities and/or counties having similar names may cause misallocation 3. Some landfills charge different fees for different jurisdictions or only accept waste from certain jurisdictions. This may create an economic incentive to misreport origin. 4. Some haulers or facilities may have contracts with some jurisdictions and not others to divert a certain percentage of waste. This may cause incentive to misreport origin. 5. Some haulers or facilities may have contracts with some jurisdictions and not others to divert a certain percentage of waste. This may cause incentive to misreport origin. 	Increase Accuracy Verifiable Cost-effective		Requires statutory change. Need to address enforcement mechanism (distribution of fines).
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4. Improve/Expand Training & Education						
Ref #	Solution Considered	Working Group Recommendation	Issue Addressed	Criteria Met/Considerations	Synth. Group Recommend ? Yes/No	Additional Staff Comments
DRS-SH-1.1	Board provide Disposal Reporting System training to facility supervisors and counties.	Short Term, Medium/ High Priority	<u>Hauler/ Self-Haul Issues:</u> Haulers/drivers do not know or have incentive to obtain accurate waste origin; no DRS enforcement for haulers; lack of training and education at	Increase Accuracy Cost-effective Ease of use/flexibility		Some cost to the Board. Additional funding may be needed if cannot be accomplished within existing budget.

			facilities; gatekeeper is key/jurisdictions have no control over private facilities. There are no standards or guidelines for collection of origin data.			
AM 1.0	<u>Board Training and Education:</u> 1. Disseminate information on adjustment method factors that have been accepted or denied previously, by publishing information on Board web site. Provided that data source meets regulatory requirements, allow flexibility in considering an alternative to a default factor.	Short Term, High Priority	<u>Adjustment Method Issues:</u> Excessive or time-consuming scrutiny of alternative adjustment factors or data sources.	Beneficial to jurisdictions Relatively easy to implement		Minimal Board cost. May require policy or guidelines to address how acceptable vs. non-acceptable alternative adjustment factor data is presented. May increase success rate of new alternative adjustment factor proposals. Unknown impact on number of new alternative adjustment factor proposals.
AM 1.4	2. Publish information on what economic activities are included in taxable sales.	Short Term, High Priority	What economic activity does Taxable Sales miss?	No cost Supported by existing BOE publication		Minimal Board cost. Should increase jurisdiction understanding of “taxable sales”.
AM 1.4	3. Publish information on the extent and scope of errors in CIWMB estimates of fourth quarter Taxable Sales.	Short Term, High Priority	Do CIWMB estimates of fourth quarter Taxable Sales add error?			Minimal Board cost. May increase number of jurisdictions that amend ARs with BOE final data.
AM 3.0	4. Publish information on inherent limits of base-year generation amounts, AM formula, and report-year disposal. Publish steps jurisdictions may take to	Short Term, High Priority	Is the Adjustment Method misunderstood?	Increase Adjustment Method understanding.		Minimal Board cost. May improve quality of Annual Reports and

	understand AM. 5. Conduct public workshops on an ongoing basis.					jurisdiction understanding of goal measurement system.
ALT 8	Board provide standard curriculum or certificate training for local government staff (especially new recycling coordinators) responsible for AB939 program implementation and other waste management duties.	Low Priority	Problem in AB 939 compliance caused by lack of formal training and education opportunities or requirements for local program coordinators in resource management issues and strategies.	<ol style="list-style-type: none"> 1. Facilitates implementation of AB 939 programs by providing help to those made responsible for AB 939 – local jurisdictions. 2. Moderate resources may be needed at the Board to set up training and certification. 3. Does not directly address measurement issues. 4. Models exist at the state level already. 		In the past, several colleges and universities have had certificate programs.

5. Increase Board Assistance						
Ref #	Solution Considered	Working Group Recommendation	Issue Addressed	Criteria Met/Considerations	Synth. Group Recommend ? Yes/No	Additional Staff Comments
DRS-SH-3.1	Board draft model ordinance and recommend local jurisdictions pass ordinances to regulate haulers to implement reporting procedures, to assess penalties to obtain accurate data and other information and to enforce timeliness of reporting information. Board should encourage jurisdictions to require commercial self-haulers to report origin information to the county. Information feedback—When a jurisdiction finds out a hauler has misreported origin information a	Short Term, Medium Priority	Enforcement Issues: No penalties for misinformation or untimely information; facilities may limit waste disposal from some jurisdictions or charge different fees resulting in inaccurate origin information.	Increase Accuracy Verifiable Enforceable		<p>Some increased cost to the Board to develop model ordinance.</p> <p>Places more burden on and increases cost to the jurisdictions to pass ordinances and enforce reporting.</p>

	jurisdiction could inform the hauler to report correctly or they will apply penalties.					
DRS-SH-3.3; 3.7; 4.6; DRS – SW-2.2	<p>Board provide economic incentives/ funding for:</p> <ul style="list-style-type: none"> Jurisdictions to pass ordinances to regulate haulers. Jurisdictions to conduct independent DRS audits. Solid waste facility operators to purchase computers with compatible software and require standardized data collection. Alternatives to disposal for all special wastes. 	Long Term, Medium Priority	<p>There are no penalties for misinformation/ untimely information; facilities may limit waste disposal from some jurisdictions or charge different fees resulting in inaccurate origin information.</p> <p>Lack of scales and inconsistent standard conversion weight factors for Self Haul vehicles may cause inaccuracies in waste allocation.</p> <p>There are limited diversion opportunities for special wastes as a whole.</p> <p>Special waste handling takes away from the implementation of diversion programs.</p>	Increase Accuracy Cost-effective Enforceable		<p>Requires or may require regulatory or statutory change.</p> <p>Increased cost to the Board.</p> <p>Jurisdictions may be able to increase accuracy of disposal numbers through landfill audits. Audits might not be consistent statewide.</p> <p>May not be a benefit for most jurisdictions where special waste constitutes a small percentage of the waste stream.</p> <p>Would require a change in facility operations that use a specific software system for multiple purposes (e.g., billing).</p>
AM 2.0	<ul style="list-style-type: none"> Cooperative solid waste generation studies to establish new jurisdiction base-years. 	Long Term, High Priority	How can base-year accuracy be improved at a reduced cost?	Low cost for jurisdictions, high cost for State Increase accuracy		<p>May require statutory change. Substantial Board cost. If properly conducted, will improve AM accuracy.</p>
DRS-SW-3.1	Update Local Enforcement Agency (LEA) Alternative Daily Cover (ADC) Advisory #48, establishing performance standards using	Short Term, High Priority	Alternative Daily Cover (ADC) may be overused at some landfills.	Increase Accuracy Verifiable Cost-effective		<p>May require regulatory change, but Board action may be needed.</p> <p>The use of industry standards may ensure</p>

	industry standards and current law. The update to include input from stakeholders in addition to the LEA community.					consistency in how ADC is used at facilities to prevent overuse or misreporting of ADC.
DRS-SW-3.2	Increase the number and types of Disposal Reporting System (DRS) reports available on the Board website, including ADC by material type and jurisdiction disposal data by disposal facility.	Short Term, High Priority	Alternative Daily Cover (ADC) may be overused at some landfills.	Cost-effective Ease of Use/ Flexibility		Would not require regulatory or statutory change. This recommendation will support the Board's efforts to make information and data readily available.
ALT 11	Remove institutional barriers to diversion programs. Examples: streamline/fast track permitting of diversion activities such as C&D processing; support development and siting of businesses that process gypsum; educate LEAs and Board staff to assist in program/facilities development. The Board should look at its own policies as well as other barriers that may inhibit the development of diversion programs.	High Priority	Barriers may exist that inadvertently delay implementation of diversion programs.	<ol style="list-style-type: none"> Does not specifically address measurement problems, but addresses unintended consequences of policies or procedures that delay programs. Could be easily implemented by directing Board staff to address barriers as they arise. Small or moderate changes at the state level can have big results at the local level. Would not address local barriers to diversion programs or processing of materials. Regulatory and statutory changes may or may not be required. 		Board would need to set up system to review policies and/or address inadvertent consequences as they are brought to the Board's attention.

6. Expand Disposal Reporting System Enforcement

Ref #	Solution Considered	Working Group Recommendation	Issue Addressed	Criteria Met/Considerations	Synth. Group Recommend ? Yes/No	Additional Staff Comments
DRS-	Board conduct county or regional	Short term, High		Increase Accuracy		Potential increased cost to the Board,

SH-3.2	audits of the facility disposal records.	priority		Verifiable Enforceable		depending on the number and frequency of the audits. Past audits have resolved issues.
DRS-SH-3.4	Make misreporting of waste origin information a criminal offense.	Long term, Medium priority	No penalties for misinformation or untimely info.. Local prosecutors want more enforcement authority.	Increase Accuracy Enforceable		Requires statute change. Increased cost for enforcement. Could be cost for jurisdiction or the Board, depending on statute change.
DRS-AL-1.3	Landfill and transfer station operators shall be required to send jurisdictions a copy of information at the same time they send it to the county, and notify affected cities of any changes to the reported numbers at the same time they notify the county.	Long term, High priority	There is a delay in obtaining information, making disposal verification difficult.	Increase Accuracy Verifiable Cost-Effective Ease of Use/ Flexibility		Would require regulatory change. Would allow jurisdictions to more quickly verify disposal data.
DRS-AL-3.2;	Require daily surveys and weigh every load, except loads transported in pick-up trucks/cars (pick-up trucks are defined as less than one ton). Exempt from the daily waste origin survey small, rural facilities.	Long term, High priority	Major waste generating events that occur during the survey week skew disposal numbers. Lack of scales and inconsistent standard conversion weight factors for SH vehicles may cause inaccuracies in waste allocation.	Increase Accuracy Verifiable Enforceable Ease of Use/ Flexibility		Requires change in regulation and/or statute needed. Would increase accuracy of the disposal data. Could be easier to train scale house staff to conduct daily, rather than trying to remember the survey week. Consistent operating practice would also increase accuracy of the data. Exempting rural counties would not create for them a financial burden, and would not require that they buy scales.
DRS-SH-4.5;	Board require scales at all solid waste facilities above a certain tonnage per day.	Long term, Medium priority	There are no standards or guidelines for collection of origin data.			Rural counties' waste makes up small percentage of the state's waste stream.
DRS-SH-4.2	Require facilities to post signs about origin collection at facilities. Language drafted by the State.	Short term, Medium priority				Exempting pick up trucks and small loads would allow smoother traffic flow at the scale house. If exempting pick-up trucks less than one ton is intended to exempt disposal tonnages from DRS, there will be no ability to cross-check the data with BOE.

						<p>Requiring scales would require statutory or regulatory change. Increased cost to facility operators/ jurisdictions. Greater financial burden on rural jurisdictions because they are most affected, but rural jurisdictions make up small percentage of the waste stream.</p> <p>Tonnage limit may exclude rural jurisdictions from requirement.</p> <p>Requiring facilities to post signs would not require regulatory change. Would assist facility operators in obtaining correct origin information. Some facilities currently have signs posted, which have proven to be successful in acquiring origin information.</p>
DRS-AL-5.1	Make solid waste facility cooperation in DRS waste origin surveys a requirement as part of the solid waste facility permit and State provide enforcement authority.	Long term, High priority	Sometimes it is difficult to get information from solid waste facilities. It is costly and time consuming to verify facility information. There are no penalties for misinformation or untimely information.	Increase Accuracy Verifiable Enforceable		<p>Would require regulatory or statutory change. Increased cost to the Board. Increased responsibility for LEAs. Disposal data more accurate.</p>
DRS-SH-2.2	Establish statewide law setting standards for collecting disposal tonnage information, authorize assessment of penalties for misinformation and untimely information, and due process procedures to address errors in the DRS including cash customers. Standards should be enforced by the State.	Long term, High priority	Fees and Waste Limits: Inaccurate allocation to jurisdictions may be due to inconsistent volume-to-weight conversion; facilities limiting waste disposal from some jurisdictions; and lack of information collected for self-haul cash customers.	Increase Accuracy Verifiable Enforceable		<p>Requires regulatory change.</p> <p>Significant cost to the Board.</p> <p>Board responsible for enforcement. Could limit jurisdictions' control.</p> <p>May increase cost to jurisdictions to increase reporting.</p>

7. Resolve Special Waste Issues

Ref #	Solution Considered	Working Group Recommendation	Issue Addressed	Criteria Met/Considerations	Synth. Group Recommend ? Yes/No	Additional Staff Comments
DRS-SW-2.1	Board support pending legislation that will exclude Class II-type waste from counting as disposal in the Disposal Reporting System.	Short term, High priority	There are limited diversion opportunities for special wastes as a whole. Special waste handling takes away from the implementation of diversion programs.	Increase Accuracy Verifiable Enforceable		If Class II tonnages are included in the jurisdiction's base year, the amounts would need to be removed. This might discourage any treatment to allow the materials to be reused or recycled.
DRS-SW-1.2	Exclude inert waste, not subject to the BOE fee and disposed at mine reclamation facilities, from the Disposal Reporting System (including the four Los Angeles County inert sites that are currently permitted).	Long term, High priority	Treating some facilities differently causes inequity because some waste types are counted as disposal and others are not, depending on regional boards and local agency requirements and location and permit status of the disposal facility.	Increase Accuracy Verifiable Enforceable		Would require regulatory or statutory change. Jurisdictions that send inert waste to those facilities will need to take tonnages out of their base year amounts, and would not be able to count any of the diversion at those sites. This could affect jurisdictions that changed their base year as part of the "LA fix".
ALT 3-a and DRS-SW-1.1	Remove uncertainties/inconsistencies with how some materials are counted for disposal at different facilities, for example special waste. May need to change the definition of solid waste in PRC section 40191(a), but issue should be addressed with input	High Priority, Short Term	Treating some facilities differently causes inequity because some waste types are counted as disposal and others are not, depending	1. May require changes to the current law defining solid waste. 2. Would eliminate diversion credit for materials that are not defined as waste. 3. Could require		Issue of inert facilities will be addressed in upcoming C&D regulations. Have existing Board policy on Class II facilities. May require a regulatory change if existing procedure is insufficient.

	from stakeholders.		on regional boards and local agency requirements and location and permit status of the disposal facility. Also, disposal of some materials is extremely variable year-to-year which makes it difficult for jurisdictions to plan and implement diversion programs.	<p>increased tracking by waste types or categories.</p> <ol style="list-style-type: none"> 4. Could require new base years. 5. Increases accuracy and eliminates equity issues when similar materials are counted differently at different facilities. 6. Need additional information to determine impacts on diversion rates. 7. Verifiable and enforceable. 		
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8. Improve/Expand Solid Waste Diversion and Responsibility						
Ref #	Solution Considered	Working Group Recommendation	Issue Addressed	Criteria Met/Considerations	Synth. Group Recommend ? Yes/No	Additional Staff Comments
ALT 4-a	<p>Focus on developing markets for recycled materials to “pull” materials out of the waste stream, rather than focusing on measurement of waste.</p> <p><u>Sub-Alternative 4-a-1:</u> Enhance Recycling Market Development Zone (RMDZ) Program</p> <p><u>Sub-Alternative 4-a-2:</u> Mandating minimum recycled content from manufacturers for an expanded list of materials</p> <p><u>Sub-Alternative 4-a-3:</u> Mandating minimum recycled content from purchasers: expanded list of materials</p> <p><u>Sub-Alternative 4-a-4:</u> Quantification of Recycled Product Market Development Efforts and</p>	High Priority	“Without markets, diversion programs fall apart.”	<ol style="list-style-type: none"> 1. Meets the intent of AB 939 by not only keeping materials out of the landfill but conserving resources by using those materials in new products and markets. 2. Doesn't specifically address measurement issues but shifts focus from measurement to efforts that help programs. 3. Requires statutory changes. 4. Could result in increased cost to state and local 		<p>Moderate to large impact on Board resources could result, if new programs and/or loans and grants are developed.</p> <p>May also require significant Board resources for implementation, compliance monitoring, and enforcement.</p>

	<p>Programs Implemented by the State</p> <p><u>Sub-Alternative 4-a-5:</u> Promote recycling by leveraging funding from various sources (separate from the RMDZ program), such as US EPA, HUD, Dept. of Commerce, private foundations, etc., for example through grants and programs such as California Jobs Through Recycling.</p>			government agencies for purchase of recycled content materials.		
ALT 6-a-1	<p>Adopt new laws to expand responsibility for diverting waste beyond cities and counties; i.e., require schools to work with local government recycling coordinators to divert waste.</p>	High Priority	<p>Jurisdictions typically don't have control over all the waste generated within their borders. More diversion could be achieved by moving responsibility for reducing waste "upstream" on those that may have more control or impact on waste generation.</p>	<ol style="list-style-type: none"> 1. Widens circle of responsibility for meeting the intent of AB 939, which helps jurisdictions meet the goals. 2. Impacts costs and resources to schools to implement new programs; increased cost and resources needed by the Board to monitor schools. 3. Does not address problems of current measurement system; may complicate measurement if schools must also measure goal achievement. 4. Opportunities for solid waste and environmental education in schools could increase if schools run their own programs. 5. Requires statutory change. 		SB 373 currently proposed in legislature.
ALT 6-a-2	<p>Place more responsibility on generators of difficult-to-handle waste.</p>	High Priority	<p>Existing law places an unequal burden on local governments,</p>	<ol style="list-style-type: none"> 1. Enhances both potential conservation of resources and reduction in landfill 		<p>May cause a shift in costs for consumers from government diversion programs to higher cost products.</p>

			which can not prevent the production of waste by manufacturers without a mechanism for increasing shared responsibility.	<p>disposal through expanded financial incentives and disincentives at all levels.</p> <ol style="list-style-type: none"> 2. Targeted implementation based on existing models will be essential in reaching goals. 3. Shifts focus from counting to implementation. 		<p>May discourage generation of difficult-to-handle waste and encourage alternatives.</p> <p>Requires statutory changes.</p>
ALT 15	Adopt new laws to expand responsibility for diverting waste beyond cities and counties; i.e., require disposal facilities to divert waste from self-haulers.	High Priority	In many cities and counties, waste that is self-hauled makes up a significant portion of the waste stream (up to 30 to 40 %). This self-haul waste escapes the regulation of cities and counties and cannot be “cost effectively” diverted by local requirements or programs.	<ol style="list-style-type: none"> 1. Expands responsibility for meeting AB 939 goals beyond local governments to parties in the best position to divert self-haul wastes. 2. Implementing new programs impacts resources and costs of disposal facility operators. 3. Tracking and measuring systems would need to be established and monitored by the Board - could be coupled with DRS. 4. Could result in significant diversion from a perhaps “untapped” waste stream that local governments find difficult to divert. 5. Would require statutory change. 		<p>Self-haul waste is predominantly construction and demolition waste which could perhaps be easily diverted.</p> <p>Many facilities have existing programs which could be used as models.</p> <p>May not be reasonable requirement for all facilities or regions – flexibility is important.</p> <p>Some Board resources required if regulations are required.</p>
ALT 6-a-4	Further promote the focus on largest individual generators, largest sectors, and most common	Low Priority	Jurisdictions typically don't have control over all the	<ol style="list-style-type: none"> 1. Could help jurisdictions improve diversion by 		This approach has been successful in increasing diversion rates for many jurisdictions.

	materials to reduce waste and recycle; include this approach in the menu of programs to be developed in ALT 2-b (emphasize diversion programs, not diversion rates).		waste generated within their borders. More diversion could be achieved by moving responsibility for reducing waste "upstream" on those that may have more control or impact on waste generation.	<p>identifying areas with less existing diversion and the most potential for improvement.</p> <ol style="list-style-type: none"> 1. Doesn't address current measurement system problems. 2. Could increase resources needed and costs to local governments and the Board, but may result in resources focused where most needed. 3. CIWMB does have tools to assist with this approach, but could perhaps increase direct assistance. 4. Could require statutory changes if new requirements are put on businesses. 		Some jurisdictions currently take this approach and could be used as models.
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9. Improve/Ease DRS Reporting

Ref #	Solution Considered	Working Group Recommendation	Issue Addressed	Criteria Met/Considerations	Synth. Group Recommend ? Yes/No	Additional Staff Comments
DRS-SH-2.2 DRS-AL-4.3 DRS-SH-1.3	<p>Create a statewide law to :</p> <ul style="list-style-type: none"> Establish standards for collecting origin and disposal tonnage information, dispatch-based allocation, and cash customer information. Authorize assessment of penalties for misinformation and untimely information. Establish due process procedures to address errors in DRS. <p>This law would apply to all landfills, material recovery facilities, and transfer stations.</p>	Long term, High priority	<p>Fees and Waste Limits.</p> <p>Inaccurate allocation to jurisdictions may be due to inconsistent volume-to-weight conversion; facilities limiting waste disposal from some jurisdictions; and lack of information collected for self-haul cash customers.</p> <p>Major waste generating events that occur during the survey week skew disposal numbers.</p>	Increase Accuracy Verifiable Enforceable		<p>Requires statutory and/or regulatory change.</p> <p>Significant cost to the Board. Board responsible for enforcement; could limit jurisdictions' control; may increase cost to jurisdictions to increase reporting.</p> <p>Standardizing collection of disposal amounts would increase efficiency and accuracy of the disposal data for the larger vehicle loads (over 1 ton).</p> <p>This could exempt some or most of the rural facilities since many of their loads are small self-haul.</p>
DRS-AL-3.2	Require daily surveys and weigh every load except loads transported in pick-up trucks/ cars (pick-up trucks are defined as less than one ton). Provide an exemption to the daily survey for small, rural facilities.	Long term, Medium priority		Increase Accuracy Verifiable		<p>Requires regulatory changes.</p> <p>More facilities are conducting daily surveys already. May be a hardship for rural counties.</p>

10. More Study Needed						
Ref #	Solution Considered	Working Group Recommendation	Issue Addressed	Criteria Met/Considerations	Synth. Group Recommend ? Yes/No	Additional Staff Comments
ALT 3-b-1	Investigate use of disposal data (not generation) as an alternative way to demonstrate compliance.	High Priority	Addresses inaccuracies of base years and the adjustment method by only using disposal data.	<ol style="list-style-type: none"> 1. May simplify and increase accuracy of measurement by using only "real" measurements to assess progress. 2. Accuracy of DRS data even more critical. 3. Simpler system shifts more resources to programs. 4. Current field measurement system doesn't change – only how the data is used. 5. Need investigation of how factors such as population, employment, etc. relate to waste disposal rather than waste generation. 6. Would require statutory change to establish disposal goals. 7. Could be viable option for jurisdictions for whom present measurement system doesn't work well. 		<ol style="list-style-type: none"> 1. The group looked at several ways a measurement system that only uses disposal data could be developed; each has strengths and limitations, and more research is needed to fully develop and test the various options. Using only disposal data could potentially be a very accurate measurement system. 2. If new measurement standards are developed, both jurisdictions meeting the goals under the old measurement system and those not meeting the goals may be now seen as meeting the same standard; this could be viewed as unfair.

AM 1.0	<ul style="list-style-type: none"> Continue further statistical analysis of the accuracy of AM formula, including factor weighting, long term accuracy, and inter-relationships between independent variables. 	Ongoing	Do combined default population and economic change factors, and formula weights, accurately estimate waste generation?	<p>Improve accuracy over time</p> <p>Reasonable cost</p> <p>May require additional statistical assistance</p> <p>Benefits a large number of jurisdictions</p>		<p>May require additional staff and/or contract funding by the Board.</p> <p>Greater AM accuracy may require more complex AM formula.</p> <p>May or may not benefit many jurisdictions.</p>
AM 1.2	<ul style="list-style-type: none"> Monitor 2000 Census data publication & investigate potential issues 	Short Term, Medium to Low Priority	Will 2000 Census data change DOF population estimates and impact diversion rate estimates?	<p>1/1/2000 DOF population estimates (Board default 2000 population) did not rely on 2000 Census data, so not an issue for 2000 diversion rates</p> <p>May impact accuracy of future diversion rates</p>		<p>No additional cost anticipated.</p> <p>Future impact on diversion rates unknown.</p>
AM 1.5	<ul style="list-style-type: none"> Do further research on merits of using BOE's Taxable Sales Deflator, rather than CPI, in AM formula. 	Medium Term, Medium Priority	How does BOE's Taxable Sales Deflator differ from CPI?	<p>Not widely used and requires special calculations</p> <p>Available at no charge</p> <p>Comparative accuracy Unknown</p>		<p>Moderate Board cost to research further, uncertain cost/benefit.</p> <p>Use of BOE Taxable Sales Deflator in default AM formula would require regulatory change.</p>

11. Adjustment Method Factors:

Ref #	Solution Considered	Working Group Recommendation	Issue Addressed	Criteria Met/Considerations	Synth. Group Recommend ? Yes/No	Additional Staff Comments
AM 1.1	<u>Default:</u> <ul style="list-style-type: none"> Continue using DOF population in the Adjustment Method formula. 	Ongoing	How accurate is DOF population estimate?	Flexible and easy to use Cost effective Currently, only source available for all jurisdictions at county level		No additional cost. No change in AM accuracy.
AM 1.3	<ul style="list-style-type: none"> Allow continuing use of county level EDD Labor Force Employment as default AM factor. 	Ongoing	Is EDD Labor Force employment the most accurate measure available?	Flexible and easy to use Cost effective Available at county level		No additional cost anticipated. No change in AM accuracy.
AM 1.4	<ul style="list-style-type: none"> Allow continuing use of Board Of Equalization (BOE) Taxable Sales. 	Ongoing	How accurate is BOE Taxable Sales?	No cost		No additional cost anticipated. No change in AM accuracy.
AM 1.5	<ul style="list-style-type: none"> Continue use of CPI as default inflation adjustment for report-year BOE Taxable Sales. 	Ongoing	How accurate is CPI and does it overestimate true inflation and reduce impact of BOE Taxable Sales adjustment factor?	Low cost Easy to use Comparative accuracy unknown		No additional cost anticipated. No change in AM accuracy. CPI widely understood by jurisdictions.

11. Adjustment Method Factors: (continued)

Ref #	Solution Considered	Working Group Recommendation	Issue Addressed	Criteria Met/Considerations	Synth. Group Recommend ? Yes/No	Additional Staff Comments
AM 1.3	Alternative: <ul style="list-style-type: none"> Use county level EDD Labor Force Employment or county level EDD Industry Employment as default AM factor. 	Short Term, High Priority	How does county level EDD Industry Employment compare to EDD Labor Force Employment?	No difference for most jurisdictions Available at no charge EDD Industry Employment available for most jurisdictions No change in regulation or statute required		Minimal additional staff resources may be required for Board staff & jurisdiction training. Increases jurisdiction flexibility, does not necessarily improve AM accuracy. Jurisdictions with low population and large industrial base likely to benefit.
	<ul style="list-style-type: none"> Accept county level BEA Industry Employment as alternative adjustment factor. 	Short Term, High Priority	How does US Dept. of Commerce, Bureau of Economic Analysis (BEA) Industry Employment compare to EDD Industry Employment?	Existing regulations do not automatically allow BEA Employment Available at no charge Minimal diversion rate impact		Minimal additional staff resources may be required to train Board staff. Increases jurisdiction flexibility, does not necessarily improve AM accuracy.
	<ul style="list-style-type: none"> Use third party private sector information as alternative measure of employment. 	Short Term, High Priority	Are there other sources for measures of employment?	Existing regulations do not automatically allow a specific private sector source for Employment data Available at some cost Diversion rate impact unknown		Minimal to moderate additional Board staff resources needed to review alternative factor proposals. Moderate jurisdiction cost vs. unknown benefit of obtaining and utilizing this data. Increases jurisdiction flexibility, unknown impact on AM accuracy.

	<ul style="list-style-type: none"> Accept city level EDD Industry Employment as alternative adjustment factor. 	Short Term, High Priority	Is it feasible to use city level EDD Industry Employment as a default?	<p>Not available for 1990 base-year; Allow 1991 data substitution for 1990 base-year if city demonstrates 1990-1991 employment trend was increasing</p> <p>Substantial EDD charge for data</p> <p>Data is by zip code, and zip codes change over time</p> <p>Zip code may not coincide with jurisdiction boundaries</p>		<p>Minimal to moderate additional Board staff resources needed to review alternative factor proposals.</p> <p>Moderate jurisdiction cost vs. unknown benefit of obtaining and utilizing this data.</p> <p>Data acquisition cost for jurisdictions proportional to jurisdiction size.</p> <p>Increases jurisdiction flexibility, does not necessarily improve AM accuracy.</p> <p>Jurisdictions with low population and large industrial base likely to benefit.</p> <p>Report-year data not available until December following report-year.</p>
	<ul style="list-style-type: none"> Accept use of EDD Labor Force Employment for Residential Adjustment Factor (RAF) calculation, and EDD Industry Employment for Non-Residential Adjustment Factor (NRAF) calculation, as alternative AM formula. 	Long Term, High Priority	Is it acceptable to allow use of EDD Labor Force Employment to estimate residential waste generation and to use EDD Industry Employment to estimate non-residential waste generation?	<p>Available at low cost</p> <p>Requires manual diversion rate calculation</p> <p>Minimal diversion rate Impact</p> <p>Industry Employment available for most jurisdictions</p> <p>Regulations do not automatically allow</p>		<p>Moderate Board cost to change regulations and modify Website.</p> <p>Minimal to moderate jurisdiction cost</p> <p>Adds complexity to AM formula.</p>
	<ul style="list-style-type: none"> Accept jurisdiction employment data from business licenses as alternative AM factor. 	Short Term, High Priority	Is it feasible to use jurisdiction business license employment data as an alternative AM factor?	<p>Requires use of same data collection methodology for base-year and report-year</p> <p>Available at low cost</p> <p>Regulations do not automatically allow</p>		<p>Minimal to moderate additional Board cost.</p> <p>Minimal cost for jurisdictions.</p> <p>Increases jurisdiction flexibility, unknown impact on AM accuracy.</p>

12. Incentives/Not Enforcement

Ref #	Solution Considered	Working Group Recommendation	Issue Addressed	Criteria Met/Considerations	Synth. Group Recommend ? Yes/No	Additional Staff Comments
ALT 7-a	Change diversion rate measurement system to provide incentives rather than fines.	Not Forwarded (by only one vote)	More diversion might occur by providing incentives rather than focusing on a measurement system and fines for not meeting numerical compliance.	<ol style="list-style-type: none"> 1. May or may not meet the spirit and goals of AB 939 – encourages diversion through program incentives, but may decrease diversion if there are no consequences for not meeting the goal. 2. Does not address current measurement problems, but de-emphasizes measurement. 3. May increase costs to Board and provide more resources to local governments, depending on incentives developed. 4. Would require statutory changes. 		

13. Specific Alternative Measurement Systems

Ref #	Solution Considered	Working Group Recommendation	Issue Addressed	Criteria Met/Considerations	Synth. Group Recommend ? Yes/No	Additional Staff Comments
Alt 10-b	Remove the 10% diversion limit for direct burn transformation processes for yard waste and wood waste materials used for power generation. (Note: option of including MRF residuals also was not forwarded.)	Not Forwarded (by only one vote)	There are concerns that this extension would "open the door" to allowing "credits" for incineration of other types of waste. However, legislation could limit the "scope" based on material type and apply the allowance only to areas where there are no alternative, economical ways of handling the material, except landfilling.	<ol style="list-style-type: none"> 1. Meets the intent of AB 939 to the extent that waste materials are diverted from landfills, but would "elevate" direct burn disposal in the waste hierarchy. 2. Would address statewide energy issues by increasing feedstock materials for under-utilized cogeneration facilities. 3. Forest debris and wood waste are poor feedstock materials for compost operations and there are limited alternative re-use options for these materials. 4. Would require controversial legislative action. 		<ol style="list-style-type: none"> 1. May require tracking and regulating of facilities not currently part of measured waste system. 2. Regulating new types of facilities is often controversial. 3. MSW transformation facilities may see lifting limits on all other types of transformation as unfair.
ALT 10-a	Remove the existing 10% diversion limit for non-burn transformation processes such as bioreactors, gasification, hydrolysis, etc.	High Priority	Under existing law, jurisdictions can claim only a portion of transformed waste as diversion. This has created a waste stream that is neither disposed nor diverted. It also serves to discourage development of	<ol style="list-style-type: none"> 1. Meets the intent of AB 939 to the extent that it provides credit for diverting waste from landfills. 2. Would eliminate confusion about reporting certain types of unclassified waste stream that are neither diversion nor disposal under 		<ol style="list-style-type: none"> 1. For materials currently handled outside the measured waste stream, there is no 10% limit. 2. May require tracking and regulating of facilities not currently part of measured waste system. 3. Regulating new types of facilities is often controversial. Would require some Board resources. 4. Could be seen as moving transformation up the waste management hierarchy.

			innovative non-burn technologies that provide a means of waste diversion from landfills.	<p>existing rules – this becomes an issue for jurisdictions doing new base years.</p> <p>3. Provides incentives for innovative waste diversion activities for materials that are harder to divert (e.g., food waste).</p> <p>4. Would require legislative action.</p>		
ALT 1-a-3	Verify program implementation at the jurisdictional level. If all jurisdictions within the county are implementing programs, and all jurisdictions agree to be counted together, then they may use the countywide diversion rate.	Medium Priority	Numbers are more accurate at the countywide level. Disposal reporting and base year inaccuracies within a single county have larger impact on smaller jurisdictions.	<p>1. Shifts focus to implementation, without sacrificing accountability or 50% mandate.</p> <p>2. Shifts limited resources to implementation.</p> <p>3. Easy to implement, cost-effective.</p> <p>4. Provides flexibility and local decision-making.</p> <p>5. Improves accuracy of measurement.</p> <p>6. Compatible with existing regional agency alternative.</p> <p>7. Increases accuracy; verifiable.</p>		<p>1. Requires statutory change, unlike regional agencies.</p> <p>2. No clear enforcement mechanism.</p>
ALT 3-b-2	Combine disposal based measurement with implementing suite of programs (as described in Alt 2-b, emphasize diversion programs, not diversion rates) and show a reduction in disposal every year; jurisdictions can petition for relief in showing yearly decrease in disposal amounts based on significant growth and proposed programs to address the growth.	Medium Priority	Addresses inaccuracies of base years and the adjustment method by only using disposal data; also emphasizes program implementation.	<p>1. May simplify and increase accuracy of measurement by using only “real” measurements to assess progress.</p> <p>2. Accuracy of DRS data even more critical.</p> <p>3. Simpler system shifts more resources to programs.</p> <p>4. Current field measurement system doesn’t change – only</p>		<p>1. Jurisdictions may need to develop contingencies for increases in disposal caused by disasters, etc.</p> <p>2. May increase staff review time for annual reports and biennial reviews if many jurisdictions submit petitions.</p>

				<p>how the data is used.</p> <p>5. Need investigation of how factors such as population, employment, etc. relate to waste disposal rather than waste generation.</p> <p>6. Requires demonstration of effective programs.</p> <p>7. Could be viable option for jurisdictions for whom present measurement system doesn't work well.</p>		
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14. New Base-Year

Ref #	Solution Considered	Working Group Recommendation	Issue Addressed	Criteria Met/Considerations	Synth. Group Recommend ? Yes/No	Additional Staff Comments
AM 1.0	Require new base-year if balanced growth rate for population, employment, and CPI-adjusted taxable sales exceeds 14%.	Medium to Long Term, High Priority	Do combined default population and economic change factors, and formula weights, accurately estimate waste generation?	Regulations do not automatically allow this solution Reduces compliance order frequency		May require regulatory or statutory change. Substantial Board resources needed to process, evaluate and present new base-year requests to Board. Significant jurisdiction cost. Many jurisdictions could be required to do new base-years.